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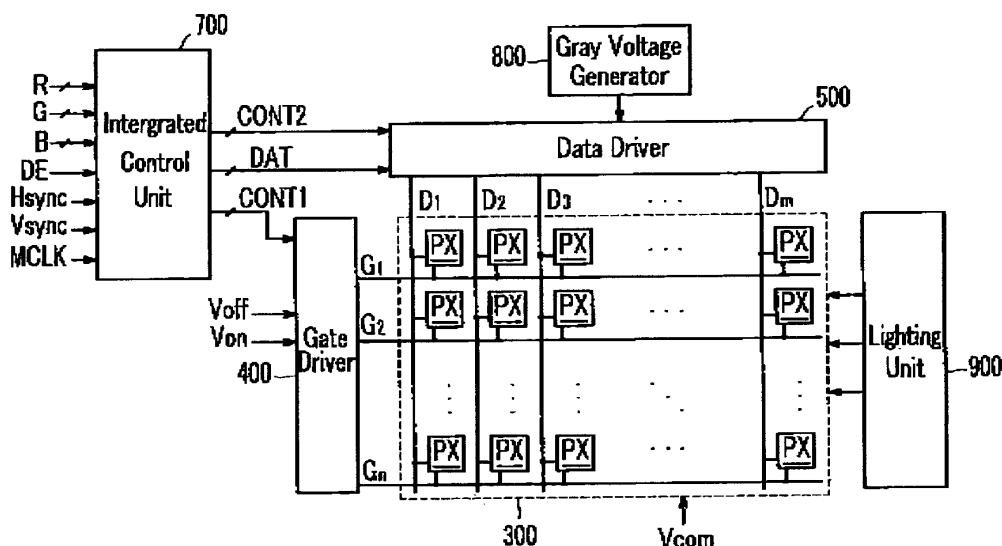
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(54) **Liquid crystal display device and integrated circuit chip therefor**

(57) A display device includes a plurality of pixels; a gate driver that supplies a gate signal to the pixels; a data driver that supplies a data voltage to the pixels; an additional frame generator that generates an image signal of a third frame based on an image signal of a first frame and a second frame; a signal correction unit that corrects

an image signal to generate the corrected image signal; and a signal controller that arranges the corrected Image signal to supply the arranged signal to the data driver and that controls the data driver and the gate driver, wherein the additional frame generator, the signal correction unit, and the signal controller are integrated in one IC chip.

FIG.2





EUROPEAN SEARCH REPORT

Application Number
EP 07 01 1000

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 2005/078069 A1 (AIBA HIDEKI [JP] ET AL) 14 April 2005 (2005-04-14)	1-12, 19-29, 33-35	INV. G09G3/36
Y	* paragraphs [0004], [0036] - [0061] *	13-18, 30-32,36	
X	US 2005/253793 A1 (CHIEN LIANG-CHEN [TW] ET AL) 17 November 2005 (2005-11-17) * the whole document *	1,19,33	
X	US 2002/044151 A1 (IJIMA YUKIO [JP] ET AL) 18 April 2002 (2002-04-18) * the whole document *	1,19,33	
X	US 2004/041745 A1 (CHEN LI-YI [TW]) 4 March 2004 (2004-03-04) * the whole document *	1,19,33	
Y	US 2001/024199 A1 (HUGHES JOHN R [EG] ET AL) 27 September 2001 (2001-09-27) * paragraphs [0033] - [0036], [0040]; figures 2,3 *	13,30-32	
			TECHNICAL FIELDS SEARCHED (IPC)
			G09G
Y	US 5 847 688 A (OHI SUSUMU [JP] ET AL) 8 December 1998 (1998-12-08) * column 6, lines 43-65; figure 8 *	13-18, 30-32,36	
Y	US 2005/099549 A1 (CHEN CHENG-JUNG [TW] ET AL) 12 May 2005 (2005-05-12) * paragraphs [0021] - [0025], [0035]; figure 4 *	13,30-32	
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
The Hague		18 August 2009	van Wesenbeeck, R
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 07 01 1000

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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18-08-2009

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2005078069 A1	14-04-2005	US 2008238847 A1	02-10-2008
US 2005253793 A1	17-11-2005	NONE	
US 2002044151 A1	18-04-2002	JP 2002108294 A	10-04-2002
		KR 20020028784 A	17-04-2002
US 2004041745 A1	04-03-2004	NONE	
US 2001024199 A1	27-09-2001	CN 1381035 A	20-11-2002
		WO 0171703 A1	27-09-2001
		EP 1190411 A1	27-03-2002
		JP 2003528518 T	24-09-2003
US 5847688 A	08-12-1998	JP 3202450 B2	27-08-2001
		JP 7121144 A	12-05-1995
US 2005099549 A1	12-05-2005	TW 230370 B	01-04-2005